

**REMARKS**

Applicant thanks the Examiner for examining the application. Applicant has canceled claims 5, 14, 23, and 32, and amended claims 1, 10, 19, and 28, as discussed further below. Applicant has also added new claims 42-44. Support for the amendment of claims 1, 10, 19, and 28 may be found throughout the specification, and the amendment of claims 1, 10, 19, and 28 does not constitute the addition of new matter. Similarly, support for the addition of new claims 42-44 may be found throughout the specification, and the addition of new claims 42-44 does not constitute the addition of new matter. With the amendment, claims 1-44 are now pending.

**Claim Rejections – 35 U.S.C. § 103(a)**

The Examiner rejected claims 1, 4, 5, 6, 7, 10, 13-16, 19, 22-25, 28, 31-33, 36, 39, and 40 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,477,586 to Achenson et al. in view of U.S. Patent No. 5,438,680 to Sullivan.

Applicant has amended Applicant's independent claim 1 to include the limitation present in Applicant's now-canceled dependent claim 5. Applicant's amended independent claim 1 now requires, among other things, from a worker thread, processing a task from a task queue not associated with the thread. The Examiner cited to col. 5 lines 60-63 and col. 6 line 64 to col. 7 line 9 of Achenson et al. as teaching or suggesting this limitation.

The cited text of Achenson et al. states as follows:

Alternatively, the worker thread receiving the RPC message may indicate that message is not in the appropriate process within the distributed system to handle the RPC request and that the RPC message is to be forwarded to another process.

...  
In a case where an RPC request message is determined by the worker thread of Process 2A to be one which is not processable by that worker thread, the worker thread will determine from data stored in process 2A which other process in the distributed system will be able to deal with the RPC request. The RPC request message is then placed on the appropriate queue for transfer to a further process. For example, the RPC message in process 2A of block 32 can be placed in queue Qc shown in block 78 for transfer to process 3 of block 34 via connection 92. The message thread, or associated send function block, sends

the RPC request message over connection 92 to process 3 where message thread in block 80 receives the message.

Thus, the cited text of Achenson et al. teaches that, when a message is not in an appropriate process, the message is forwarded or otherwise transferred to an appropriate process. More specifically, as Achenson et al. details in col. 7 lines 2-9, the message initially associated with the thread/queue pair identified as element 78 in Fig. 2, corresponding to Process 2A, is sent to a different thread/queue pair, namely that identified as element 80 in Fig. 2, corresponding to Process 3. This is in direct contrast to Applicant's amended independent claim 1, which requires that, from a worker thread, processing a task from a task queue not associated with the thread. Therefore, Achenson et al. fails to teach or suggest this limitation of Applicant's amended independent claim 1, and thus Achenson et al. does not teach or suggest Applicant's amended independent claim 1. Applicant's amended independent claim 1 is therefore allowable over Achenson et al., and is further allowable over the combination of Achenson et al. with Sullivan.

Applicant amended Applicant's independent claims 10, 19, and 28 similarly to the amendment of Applicant's allowable amended independent claim 1. Namely, the limitations formerly present in Applicant's now-canceled dependent claims 14, 23, and 32 are now found in, respectively, Applicant's amended independent claims 10, 19, and 28. Thus, Applicant's independent claims 6, 15, 24, 33, 39, and 40, as well as Applicant's amended independent claims 10, 19, and 28, all include limitations similar to those of Applicant's allowable amended independent claim 1. Therefore, for at least the reason(s) given above with regards to Applicant's allowable independent claim 1, Applicant's independent claims 6, 15, 24, 33, 39, and 40, as well as Applicant's amended independent claims 10, 19, and 28, are themselves not taught or suggested by Achenson et al. in view of Sullivan, and thus, Applicant's independent claims 6, 15, 24, 33, 39, and 40, as well as Applicant's amended independent claims 10, 19, and 28, are themselves allowable over the combination of Achenson et al. with Sullivan.

Applicant's dependent claims 4, 7, 13, 16, 22, 25, 31, and 36 depend from, respectively, Applicant's allowable amended independent claims 1, 10, 19, and 28, and Applicant's allowable independent claims 6, 15, 24, and 33. Therefore, for at least the reasons given above with regards to Applicant's allowable amended independent claims 1, 10, 19, and 28, and Applicant's allowable independent claims 6, 15, 24, and 33, Applicant's dependent claims 4, 7, 13, 16, 22, 25, 31, and 36 are themselves not taught or suggested by Achenson et al. in view of Sullivan, and thus, Applicant's dependent claims 4, 7, 13, 16, 22, 25, 31, and 36 are themselves allowable over the combination of Achenson et al. with Sullivan.

The Examiner then rejected claims 2, 3, 8, 9, 11, 12, 17, 18, 20, 21, 26, 27, 29, 30, 34, and 35 under 35 U.S.C. § 103(a) as being unpatentable over Achenson et al. in view of Sullivan and further in view of U.S. Patent No. 6,377,984 to Najork et al.

Applicant's dependent claims 2, 3, 8, 9, 11, 12, 17, 18, 20, 21, 26, 27, 29, 30, 34, and 35 depend from, respectively, Applicant's allowable amended independent claims 1, 10, 19, and 28, and Applicant's allowable independent claims 6, 15, 24, and 33. Therefore, for at least the reasons given above with regards to Applicant's allowable amended independent claims 1, 10, 19, and 28, and Applicant's allowable independent claims 6, 15, 24, and 33, Applicant's dependent claims 2, 3, 8, 9, 11, 12, 17, 18, 20, 21, 26, 27, 29, 30, 34, and 35 are themselves not taught or suggested by Achenson et al. in view of Sullivan, and thus, Applicant's dependent claims 2, 3, 8, 9, 11, 12, 17, 18, 20, 21, 26, 27, 29, 30, 34, and 35 are also not taught or suggested by Achenson et al. in view of Sullivan and further in view of Najork et al. For these reasons alone, Applicant's dependent claims 2, 3, 8, 9, 11, 12, 17, 18, 20, 21, 26, 27, 29, 30, 34, and 35 are themselves allowable over the combination of Achenson et al. with Sullivan and further with Najork et al.

Applicant further notes that Applicant's dependent claim 3 is, on its face, itself not taught or suggested by Najork et al. Applicant's dependent claim 3 requires that selecting comprises determining whether a selected task queue is in a busy state. The Examiner cited to col. 3 lines 22-33 of Najork et al. as teaching or suggesting this

limitation. However, Najork et al. fails to teach or suggest selecting comprises determining whether a selected task queue is in a busy state, as required by Applicant's dependent claim 3.

Najork et al. does not teach or suggest making any kind of determination of whether a selected empty queue is in a busy state. Rather, when an underlying queue becomes empty, Najork et al. teaches that a thread associated with that empty queue begins to enqueue uniform resource locators (URLs) from a main queue into other underlying queues; *see* Najork et al. col. 3 lines 25-26. This continues until the thread finds a URL whose corresponding host is not yet assigned to any underlying queue; at which point, that host is assigned to the empty queue, which is then enqueued with that URL; *see* Najork et al. col. 3 lines 26-31. Najork et al. does not teach or suggest how it's invention knows that the queue was empty, or that it's invention knows what is going on inside any queue. Indeed, Najork et al. says nothing about determining whether a selected task queue is in a busy state, as required by Applicant's dependent claim 3. Thus, for this reason alone, Najork et al. does not teach or suggest Applicant's dependent claim 3, and therefore Applicant's dependent claim 3 is itself allowable over Najork et al. and is also allowable over the combination of Achenson et al. and Sullivan with Najork et al.

Applicant's dependent claims 9, 12, 18, 21, 27, 30, and 35 all contain limitations similar to those of Applicant's allowable dependent claim 3. Therefore, for at least the reason given above with regards to Applicant's allowable dependent claim 3, Najork et al. does not teach or suggest Applicant's dependent claims 9, 12, 18, 21, 27, 30, and 35, and therefore Applicant's dependent claims 9, 12, 18, 21, 27, 30, and 35 are themselves allowable over Najork et al. and are also allowable over the combination of Achenson et al. and Sullivan with Najork et al.

The Examiner then rejected claims 37, 38, and 41 under 35 U.S.C. § 103(a) as being unpatentable over Achenson et al. in view of Sullivan and further in view of U.S. Published Patent App. No. 2003/0225815 to Brenner et al.

Applicant's independent claim 37 requires, among other things, assigning a task

to a task queue in an essentially random fashion, comprising: using a random number generator to identify an initial task queue; upon determining that the initial task queue is not empty, searching the other task queues for an empty queue; and upon finding an empty task queue, storing the task in the empty task queue. The Examiner cites to paragraph 0043 of Brenner et al. as teaching or suggesting upon determining that the initial task queue is not empty, searching the other task queues for an empty queue, and upon finding an empty task queue, storing the task in the empty task queue.

However, nowhere in the text of Brenner et al. does Brenner et al. teach or suggest taking any actions upon determining that the initial task queue is not empty, as required by Applicant's independent claim 37. Indeed, the system taught by Brenner et al. takes action "when an unbound new thread Th13 is created as part of a new process, or job," Brenner et al. para. 0043 lines 1-2, and that action is merely an attempt "to place the thread in a run queue associated with an idle CPU", Brenner et al. para. 0043 lines 3-4. There is no determination made that an initial task queue is not empty, as required by Applicant's independent claim 37. Thus, Brenner et al. does not teach or suggest this limitation of Applicant's independent claim 37, and therefore, the combination of Achenson et al. with Sullivan and further with Brenner et al. does not teach or suggest Applicant's independent claim 37. Applicant's independent claim 37 is therefore allowable over Brenner et al. and is also thus allowable over the combination of Achenson et al. with Sullivan and further with Brenner et al.

Applicant's independent claims 38 and 41 include limitations similar to those of Applicant's allowable independent claim 37. Therefore, for at least the reason given above with regards to Applicant's allowable independent claim 37, Applicant's independent claims 38 and 41 are not taught or suggested by Brenner et al. and thus are not taught or suggested by the combination of Achenson et al. with Sullivan and further with Brenner et al. Applicant's independent claims 38 and 41 are therefore themselves allowable over the combination of Achenson et al. with Sullivan and further with Brenner et al.

**CONCLUSION**

Applicant believes this Amendment and Response to be fully responsive to the present Office Action. Thus, based on the foregoing Remarks, Applicant respectfully submits that this application is in condition for allowance. Accordingly, Applicant requests allowance of the application.

Applicant hereby petitions for any extension of time required to maintain the pendency of this case. If there is any fee occasioned by this response that is not paid, please charge any deficiency to Deposit Account No. 50-3735.

Should the enclosed papers or fees be considered incomplete, Applicant respectfully requests that the Patent Office contact the undersigned collect at the telephone number provided below.

Applicant invites the Examiner to contact the Applicant's undersigned Attorney if any issues are deemed to remain prior to allowance.

Respectfully submitted,



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